

Mecklenburg County Air Quality

PERMIT APPLICATION REVIEW SUMMARY

Title V

Section A: FACILITY INFORMATION		Existing	X	New	
Company Name (Legal Corporate Name)	Gerdau Ameristeel US, Inc.				
Site Name (If Different From Above)	Gerdau Long Steel North America – Charlotte Mill				
Site Address (Street, City, Zip Code)	6601 Lakeview Road, Charlotte, 28269				
General Description of Business	Steel Manufacturing				
Facility AQ Classification(s)	Title V	Site Consistent w/ Zoning? (Y/N)		Y	

Section B: APPLICATION INFORMATION		Modified		New	
Date of Application	8/29/2018	Application Tracking Number		2018-AQ-48774	
Date Complete Application Received	10/30/2018	AQC Date/Public Comment Opens		Newspaper & website notice, 3/25/19 AQC	
Confidentiality Requested?	No	AQC Agenda Type: Notice, Alternate, FYI		Alternate	
Application Results: Brief description of actions requested by application and/or taken by MCAQ.		5-year renewal of Title V Permit			
Permit Issued as a Result of Application – Number:		19-01V-567			
Permit Voided as a Result of Application – Number:		14-02V-567, 18-01C-567			

Section C: REGULATORY INFORMATION						
MCAPCO Regulations Applicable: List only <u>specific</u> conditions and/or regulations cited in permit issued. Indicate subpart for regulations 2.0524, 2.1110 & 2.1111.	2.0524 – NSPS Subpart AAa and IIII 2.1100 – Control of Toxic Air Pollutants 2.1111 – GACT Subpart YYYYYY 2.0515 – Particulates from Miscellaneous Industrial Processes 2.0530 – Prevention of Significant Deterioration 2.0516 - Sulfur Dioxide Emissions from Combustion Sources					
Miscellaneous Applicability (Y/N)	N	112r (40CFR68)	N	Strat. Ozone (40CFR82)	Y	CAM (40CFR64)
HAPs >10tpy, Potential Emissions: facility-wide	None					
TAPs Modeled: this application	None					

Section D: FACILITY- WIDE EMISSIONS INFORMATION					
AIR POLLUTANTS	Calculated Actual Emissions With Control (tons/year)				
	Existing	New	Total	# Change + / (-)	% Change + / (-)
Particulate Matter < 10 microns - PM-10	4.99	0	4.99	0	0
Particulate Matter < 2.5 microns – PM2.5					
Sulfur Dioxide - SO ₂	11.15	0	11.15	0	0
Nitrogen Oxides - NO _x	41.01	0	41.01	0	0
Carbon Monoxide - CO	457.14	0	457.14	0	0
Volatile Organic Compounds - VOC	31.94	0	31.94	0	0
All Hazardous Air Pollutants - HAPs	0.55	0	0.55	0	0

AQ Specialist Signature: Donna Cavaliere Date Completed: 2/7/2019

Supervisor Signature: Jason Rayfield Date Approved: 3/5/2019

SECTION A DETAILS

FACILITY INFORMATION

Detailed discussion of any items in Section A. At a minimum provide the following information:

- 1. Basis for permit: reason facility/source is "major" under Title V and submitting a Title V application*
- 2. description of business operation (more detailed than summary page)*

Basis for Permit:

Gerdau Long Steel North America – Charlotte Mill (Gerdau) has the potential to emit the following pollutants in quantities greater than major source thresholds:

PM10 (before control), SO₂, NO_x, CO, and VOC.

They have accepted synthetic minor limits for NO_x and VOC.

They are an Area Source of HAPs.

They have submitted an application for renewal of their Title V Air Quality Permit.

Gerdau has certified in the application that the facility is in compliance with all applicable requirements.

Business Operation:

The plant consists of two main manufacturing areas and fugitive emission sources:

- (ES-1) a carbon steel meltshop which contains a Consteel™ electric arc furnace (EAF), a ladle metallurgy station (LMS), a continuous billet caster, and ancillary support equipment;
- (ES-2) a hot rolling facility which contains a billet reheat furnace, a rolling mill, and ancillary support equipment; and,
- (ES-3) fugitive particulate emissions from scrap handling and heavy vehicle traffic.

The EAF is subject to New Source Performance Standards (NSPS) Subpart AAa - "Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed after August 7, 1983." The EAF is also subject to the National Emission Standard for Hazardous Air Pollutants for Area Sources Subpart YYYYYY – "Electric Arc Furnace Steelmaking Facilities". The facility is subject to Prevention of Significant Deterioration (PSD) regulations for carbon monoxide (CO) emissions.

Changes since the last Title V Permit Renewal (14-01V-567 issued 9/2/2014):

- Permit No. 14-02V-567 issued 4/20/2016 for administrative amendments including updating MCAQ address and removing ES-4 Mill Services. The mill services facility, which was no longer owned or operated by Gerdau, was removed from the permit.
- Construction Permit No. 18-01C-567 issued 1/10/2018 to update monitoring indicator ranges and equipment descriptions to more accurately reflect current operations:
 - The ES-1 description was updated to include the LMS which was inadvertently left off the previous permit.
 - Indicator ranges for furnace static pressure (EAF) and damper positions (BH-7) were updated.

These changes will be incorporated into the new Title V renewal permit.

SECTION B DETAILS					
APPLICATION INFORMATION					
<i>[List all emission sources[□] (permitted and exempt) reviewed as a result of this application, their associated control devices and pollutants. Provide a detailed discussion of any other items in Section B at bottom under "Application Notes"]</i>					
Emission Source ID	Emission Source Description	Control Device ID	Control Device Unit or Method	Miscellaneous Notes	Previous Permit No. (If applicable)
ES-1 Meltshop Operations	EAF #510 - One 90 tph capacity, 16.5 ft. inside diameter steel shell, eccentric bottom tapping, AC, refractory-lined, water-cooled electric arc furnace. (I) 1989, (M) 2004	BH-7 (I) 2001 DES (I) 2001	Voest Alpine Industries, Inc. Model 1225 Series 125 Model 36-W6W6W reverse air, forced draft dust collector for controlling particulates from the melt shop. The Direct Evacuation System (DES) for CO control.	There were no changes to the equipment since the last Title V Permit. Based on this application, a slight change is being made to the BH-7 pressure drop indicator range.	14-02V-567 18-01C-567
	Ladles and Tundishes including 5 ladle preheaters each rated at 6.0 million Btu/hr heat input and 3 tundish preheater burners each rated at 0.104 million Btu/hr heat input. (I) 1989		None	No change.	14-02V-567
	Dust Handling System (I) 2001	BH-8 (I) 2001	Griffin environmental, Inc. Model JV-54-4X dust collector to control particulates from the dust handling system	No change to equipment. Based on this application, a slight change is being made to the BH-8 pressure drop indicator range.	14-02V-567
	Two Carbon/Lime Silos: One 5,280 cf capacity (I) 1995 One 5,000 cf capacity (I) 1980	BH-5 (I) 1995 BH-6 (I) 1998.	Two Griffin Environmental Model JV-36-4X fabric filters for particulate emissions (one on each silo).	No change.	14-02V-567
	Ancillary equipment consisting of: Ladle Metallurgical Station (LMS) with Porous Plug Inert Gas Injection System, Continuous Caster, Consteel Feed System, Bucket Charge Feed System, and Overhead Material Handling Equipment. (I) 1989, (M-Consteel System) 2003	BH-7 (LMS) (I) 2001	BH-7 (see description above) for the LMS. No control for other ancillary equip.	There were no changes to the equipment since the last Title V Permit. Based on this application, a slight change is being made to the BH-7 pressure drop indicator range.	14-02V-567 18-01C-567
ES-2 Rolling Mill (I) 1979	One 115 million Btu/hr Billet Reheat Furnace located in the Rolling Mill.		None	No change.	14-02V-567
ES-3 Particulate Emissions (I)1979	Particulate emissions from scrap handling and heavy vehicle traffic.		None`	No change.	14-02V-567
IA-1	550 gallon above ground gasoline storage tank		None	No change.	14-02V-567
IA-2	2,000 Gallon above ground Diesel Tank		None	No change.	14-02V-567

Emission Source ID	Emission Source Description	Control Device ID	Control Device Unit or Method	Miscellaneous Notes	Previous Permit No. (If applicable)
IA-3	Three 9,000 Gallon above ground Oxygen Tanks		None	No change.	14-02V-567
IA-4	7,500 Gallon above ground Caster Oil Tank		None	No change.	14-02V-567
IA-5	330,000 Gallon above ground Water Surge Tank		None	No change.	14-02V-567
IA-6	30,000 Gallon above ground Propane Tank		None	No change.	14-02V-567
IA-7	11,000 Gallon above ground Waste Oil Tank		None	No change.	14-02V-567
IA-8	Twenty one (21) space heaters fired on natural gas (or propane during periods of natural gas curtailment)		None	No change.	14-02V-567
IA-9	One indoor steel grit blasting operation		None	Restated as “grit blasting” instead of “sandblasting” at Gerdau’s request.	14-02V-567
IA-10	One METCO/Sulzer Arc Welder/Spraying System in Roll Shop		None	No change.	14-02V-567
IA-11	Rolling mill ventilation		None	No change.	14-02V-567
IA-12	Parts Washers (solvent not subject to 40 CFR 63)		None	No change.	14-02V-567
IA-14 (I) 2013	100 kW (170 hp) diesel-fired emergency generator (Tier 3 certified).		None	No change.	14-02V-567

Note: In accordance with MCAPCO 1.5508(x), regulated fugitive emissions (from any of the 27 categories) as defined in 40 CFR 70.2 or for HAP emission purposes, shall be included in the same manner as stack emissions. All regulated fugitive emission sources may be grouped and listed as one (1) emission source under Emission Source ID No.

APPLICATION NOTES

As part of this application, MCAQ will remove the requirement to report monthly number of vehicle miles traveled by slag trucks (previously #8 in Condition D-14, (2) “Reports to MCAQ”). This requirement was left over from a previous permit and should have been taken out when ES-4 Mill Services was removed from the permit.

SECTION C DETAILS		
REGULATORY INFORMATION		
<i>(Identify the MCAPCO Regulations reviewed because of this application. At minimum, the regulations already listed should be reviewed and a reason given for applicability or non-applicability. If a Regulation has a standard, list the standard and indicate how the source is in compliance.)</i>		
MCAPCO REGULATION NUMBER/TITLE	EMISSION SOURCE ID No(s). SUBJECT	NOTES ON REGULATION (compliance demonstration, applicability, etc.)
1.5500 Title V Provisions	Facility-wide	The facility is classified as a Title V facility and must comply with these regulations. They have the potential to emit several pollutants in amounts greater than major source thresholds. Only sources that are subject to PSD for another pollutant are required to address GHGs under PSD review and Title V permitting.
1.5700 Toxic Air Pollutant Procedures 2.1100 Control of Toxic Air Pollutants	ES-1	The facility has previously been reviewed for toxics and has modeled for arsenic, cadmium, mercury, manganese, dioxin and chromium VI emissions. They have demonstrated compliance with respective AALs.

MCAPCO REGULATION NUMBER/TITLE	EMISSION SOURCE ID No(s). SUBJECT	NOTES ON REGULATION (compliance demonstration, applicability, etc.)
		There were no changes to emissions with this application and, therefore, no new toxics review.
2.1110 NESHAP (40 CFR 61)	N/A	None of the emission sources at the facility emit any HAP that is regulated under a Part 61 NESHAP.
2.1111 NESHAP (40 CFR 63) (MACT)	ES-1 EAF #510	The facility is subject to the area source MACT: 40 CFR 63.10680-10692 - NESHAP for Area Sources: Electric Arc Furnace Steelmaking Facilities (Subpart YYYYY). The MACT requires the facility to develop scrap management plans to control the emissions of chlorinated plastics, lead, free organic liquids and mercury and submit to MCAQ by 6/30/2008. The facility submitted the plan, postmarked on 6/30/2008 and received by MCAQ on July 2, 2008. The MACT also contains PM and VE emission limits identical to those in NSPS Subpart AAa (see below) with which the facility is already in compliance.
2.0524 New Source Performance Standards	ES-1 EAF #510 and dust handling system	The electric arc furnace and dust handling system are subject to Subpart AAa - "Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed after August 7, 1983." The furnace was constructed in 1989. The LMS, silos, and other ancillary equipment are not subject to this regulation. Gerdau is currently complying with the requirements listed in this regulation including visual inspections and recording of the damper positions, fan amperage, and opacity monitoring. Continued compliance is expected.
	IA-14 Emergency Generator	This generator is subject to NSPS Subpart IIII for compression ignition engines.
2.0530 Prevention of Significant Deterioration	ES-1	Note: Mecklenburg County is currently an attainment or maintenance area for all PSD pollutants. The facility is subject to PSD. The Title V permit has limits for compliance. This renewal does not trigger a new PSD review. Limits will be carried over to this new permit. The facility is in compliance with all limits.
2.0544 Prevention of Significant Deterioration for Greenhouse Gases	N/A	Based on the June 23, 2014 U.S. Supreme Court ruling, GHG emissions alone cannot trigger a PSD review. Sources already subject to PSD for other pollutant(s) are required to review GHGs under PSD. (see above) The facility was previously reviewed for greenhouse gases and was found to be a minor source of GHG. This renewal application does not trigger a new GHG review.
2.2100 Risk Management Program (40 CFR 68)	N/A	The facility is not subject to 40 CFR 68 – "Prevention of Accidental Releases" – Section 112(r) as indicated on the A-1 form submitted in the application.
2.2600 Source Testing	ES-1	Stack testing is required every 5 years as part of the Title V Renewal process. The facility performed stack testing in June 2018 as part of this renewal application. Results indicated compliance with the permit limits.
40 CFR 82: Stratospheric Ozone Protection	N/A	Gerdau has air conditioners for comfort; however, they do not process or repair motor vehicle air conditioners or other refrigeration equipment.

MCAPCO REGULATION NUMBER/TITLE	EMISSION SOURCE ID No(s). SUBJECT	NOTES ON REGULATION (compliance demonstration, applicability, etc.)
40 CFR 64 Compliance Assurance Monitoring	ES-1 - EAF / BH-7 Dust handling system / BH-8	A CAM plan has been prepared for ES-1. PM-10 is the only affected pollutant. Source testing, opacity monitoring, visual inspections, and monitoring of performance and operating parameters are outlined in the plan. NSPS Subpart AAa requirements will be followed. There will be no change to the CAM plan as a result of this application.
2.0515 Particulates From Miscellaneous Industrial Processes	ES-1 – EAF, dust handling, Silos ES-2 ES-3	The EAF and dust handling system are subject to this regulation even though they are also covered under the NSPS requirements (.0052 gr/dscf) as there is no conflict. Gerdau must comply with both regulations. There are no monitoring/reporting requirements listed in this regulation; however, as stated previously, NSPS requires opacity readings and there is a requirement to monitor pressure-drop and flow through the baghouse. Also, the amount of lime/carbon loaded into each silo is recorded so that emissions from the silos can be calculated. Visual inspections will be performed during silo filling operations to prevent overfill and excess emissions from the baghouse. Continued compliance is expected.
2.0516 Sulfur Dioxide Emissions From Fuel Burning Installations	ES-1 - ladle and tundish preheaters ES-2	The ladle and tundish preheaters operate on natural gas and/or propane and are subject to this regulation. The reheat furnace (rolling mill) burns natural gas or #2 FO and is also subject to this regulation. There are no monitoring/reporting requirements listed in this regulation, however, natural gas, propane, and #2 fuel oil use will be tracked for emission estimation. Gerdau will report hours of operation, tons of steel processed in the Reheat Furnace, amount of fuel used, and fuel analysis for sulfur percentages. Continued compliance is expected.

SECTION D DETAILS				
EMISSION INFORMATION				
CALCULATION METHOD CODES (List all that apply)		1= Stack test result 2= Material (mass) balance 3= EPA approved information (AP-42, CTG, etc.) 4= Other (specify in Table below)		
CALCULATION REJECTION CODES (List all that apply)		1= Calculation error 2= Wrong emission factor(s) used 3= Control efficiency(ies) not accepted 4= Other (Specify in Table below)		
EMISSION SOURCE ID NUMBER	CALCULATION METHOD CODE	ACCEPT OR REJECT?	CALCULATION REJECTION CODE	MCAQ CALCULATIONS ATTACHED?
There is no change to emissions as a result of this application. Actual emissions on the Summary page were obtained from EPIC II database for CY2017				

SECTION E
SUPPORTING DOCUMENTATION <i>(Provide brief description of any ATTACHMENTS)</i>

1. Application dated 8/29/2018
2. Revised Application dated 10/29/2018

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